

Appendix

Running a Plant Health Clinic (PHC)

The appendix contains the following resources:

1. The plant health clinic Prescription Form
2. Farmer Feedback Form
3. Template for making a photosheet
4. Plant health doctor self-evaluation form
5. Procedure check list for running plant health clinics
6. Glossary — Soils.

Appendix 1: The Plant Health Clinic Prescription Form

CLINIC		
Date:	<input type="checkbox"/> Fiji <input type="checkbox"/> PNG <input type="checkbox"/> Samoa <input type="checkbox"/> Tonga <input type="checkbox"/> Solomon Islands <input type="checkbox"/> Vanuatu	Code:
FARMER		
Family Name:	Given Names:	Sex: <input type="checkbox"/> M <input type="checkbox"/> F
Village/Settlement:	Province:	Mobile:
No. of previous clinic visit:	Age: <input type="checkbox"/> < 29 <input type="checkbox"/> 30-55 <input type="checkbox"/> > 56	Sample: <input type="checkbox"/> Yes <input type="checkbox"/> No
CROP		
Crop:	Estimate planted area (m ²):	
Variety:	Estimate no. of plants:	
Seed source:	Estimate no. of plants damaged: <input type="checkbox"/> Few <input type="checkbox"/> Many <input type="checkbox"/> All	
Previous crop:	Plant problem: <input type="checkbox"/> Common <input type="checkbox"/> New	
Crop stage:	Weather: <input type="checkbox"/> Unusual <input type="checkbox"/> Normal <input type="checkbox"/> i) Wet <input type="checkbox"/> ii) Dry	
DESCRIBE WHAT YOU SEE (if no sample, write what the farmer tells you)		
WHAT CONTROL MEASURES HAS THE FARMER TRIED?		
WHAT DO YOU THINK IS THE CAUSE OF THE PROBLEM?		
YOUR RECOMMENDATIONS		
WHAT CAN THE FARMER DO NOW?		
CULTURAL CONTROL		CHEMICAL CONTROL
WHAT CAN THE FARMER DO IN FUTURE (WHEN GROWING THE SAME CROP)?		
CULTURAL CONTROL		CHEMICAL CONTROL (remember natural enemies)
Before planting:	Any resistance varieties?	
During growth		
After harvest:		
Photo(s) taken: <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample sent to lab? <input type="checkbox"/> Yes <input type="checkbox"/> No
Plant doctor:	Signature:	Mobile no.:

Appendix 2: Farmer Feedback Form

1. Did the plant health doctor diagnose your problem? (please tick)

Yes No Not sure

Why?

2. Do you think you can carry out what the doctor said you should do?

Yes No Not sure

Why?

3. Was the clinic useful?

Yes No

Why?

4. Do you have any suggestions on how to improve the plant health clinic?

5. Would you recommend the clinic to other farmers?

Yes No

Why?

6. If there is another clinic in your area would you come again?

Yes No Maybe

Appendix 3: Photosheet template

..... (insert country)
..... (insert organisation)
..... (insert date)

Insert photo 1	Insert photo 2
Insert photo 3	Insert photo 4
Insert photo 5	Insert photo 6

This Plant Health Clinic was held at and organised by

The (*insert clinic name*) is located Km in the N/S/E/W from town.

..... (*insert number*) farmers participated at the clinic; there were (*insert number*) men and (*insert number*) women.

..... (*insert number*) samples were received.

Some of the key problems presented were:

The plant doctors were (*insert name/s*).

Other information: (*you could add if any specimens were sent for identification*)

Prepared and reported by: , organisation.

For more information contact: (*insert name*)

Ph:

Email:

Photos by: (*insert name, if a different person*).

Plant clinics are held as part of the ACIAR project: *Responding to emerging pest and disease threats to horticulture in the Pacific islands*.

Appendix 4: Plant health doctor self-evaluation form

1. How confident are you in your abilities to make correct disease diagnoses?

1 2 3 4 5

2. How confident are you in your ability to correctly diagnose pest problems?

1 2 3 4 5

3. How confident are you in your ability to make correct recommendations?

1 2 3 4 5

4. Do you feel you need more training?

Yes No

5. If 'Yes' what training is needed? Please specify (e.g. IT, diagnosis, filling out the prescription forms, interviewing farmers, etc.)

Appendix 5: Plant health clinic procedure checklist

Checklists for Plant Health Clinics	
Tick	Task
General preparation for PHCs	
	<p>Clinic timing:</p> <ul style="list-style-type: none"> ▪ how often should they be held? ▪ make a strategic PHC plan for your country ▪ always plan subsequent clinics in advance, so you can announce the next date at your current clinic
	<p>Samples:</p> <ul style="list-style-type: none"> ▪ clinics run best when farmers bring samples that are kept for reference. Discuss with your team how you are going to collect, label, manage, store and follow up with any samples before planning a PHC
	<p>Staff:</p> <ul style="list-style-type: none"> ▪ are there enough staff appointed to the PHC team to effectively run clinics in the field and conduct the administration before and after them?
Before the clinic	
	<p>Location — is it:</p> <ul style="list-style-type: none"> ▪ accessible? ▪ visible? ▪ conveniently timed?
	<p>Awareness:</p> <ul style="list-style-type: none"> ▪ radio ▪ TV ▪ phone calls ▪ emails ▪ encourage whole plant samples to be brought ▪ give farmers plenty of notice
	<p>Budget:</p> <ul style="list-style-type: none"> ▪ stationery ▪ advertisement ▪ other materials
	<p>Staff:</p> <ul style="list-style-type: none"> ▪ clinic manager ▪ data entry ▪ plant protection officers (extension, research, biosecurity) ▪ country's WhatsApp community on stand-by
At the clinic	
	<p>Setting up:</p> <ul style="list-style-type: none"> ▪ table, chairs, tarpaulin ▪ banner and pull-ups advertising the clinic ▪ access to Wi-fi, if possible ▪ a decision on what to do with 'unknowns'
	<p>Plant health doctors - what is needed?</p> <ul style="list-style-type: none"> ▪ materials for assessing samples, recording data, camera/phone for taking photos, providing Prescription Forms (see detailed list in section 7.2.3)

Tick	Task
Steps to ensure a successful PHC	
	Farmer registration and direction: <ul style="list-style-type: none"> ▪ make sure farmers' samples are processed appropriately ▪ ensure the Prescription Form and the Farmer Feedback Form are filled in accurately ▪ have the farmers complete an interview feedback form ▪ provide farmers with factsheets, leaflets, other information sheets or resources
What to do with unknowns	
	<ul style="list-style-type: none"> ▪ tell the clinic manager if you have an unknown. He or she should ask other plant health doctors who might be able to identify it ▪ make sure unknowns are assessed by one or more plant health doctor ▪ ask the WhatsApp community for help ▪ make sure the clinic manager follows up with SPC or other research/biosecurity divisions for identification ▪ do not forget about unknowns! If you tell farmers you will follow up after the clinic to help them, do not forget to get an answer for them <p>If there is no follow up, farmers will not come to future clinics.</p>
Immediately after the clinic	
	<ul style="list-style-type: none"> ▪ enter all the data from the Prescription Forms in the database if you are not using the Kobotoolbox app ▪ collate Farmer Feedback forms (the clinic manager usually does this) ▪ follow up on any unknowns that have not been solved
	Review and reflection: <ul style="list-style-type: none"> ▪ what went well? ▪ what could have been better? ▪ what changes will you make the next time?

Glossary – Soils

Clay	Smallest of the soil particles. Often with plate-like shapes, feels sticky when wet. Refers to a soil texture of more than 40% clay particles.
Humification	Process by which organic matter decomposes to form humus.
Humus	The result of the decomposition by microorganisms of the organic components of the soil.
Micronutrients	Chemical elements required in trace amounts for the growth of plants.
Infiltration rate	How quickly water enters the soil (usually measured in cms per hour).
Ion	Atom or group of atoms that are electrically charged.
Macronutrients	Chemical elements needed by plants in relatively large quantities.
Mineralisation	Conversion of an element from an organic to an inorganic state as a result of microbial decomposition.
Minerals	Naturally occurring solid with defined physical, chemical, and crystalline properties.
Mycelium	A network of thread-like growths of a fungus.
Mycorrhiza	A fungus that forms a close relationship with the roots of plants, exchanging chemicals that each cannot otherwise obtain, for the benefit of both.
Organic matter	The breakdown of plants, animals and microorganisms. Soil organic matter forms humus. Always contains compounds of carbon.
Percolation/permeability	The ease with which water and air move through the soil.
Porosity	Amount of pore space. Infiltrations rates are higher if porosity is high.
Rhizosphere	The soil surrounding and directly influence by plant roots.
Sand	Largest of the soil particles. Feels gritty and coarse to the touch. Refers to soil texture of at least 85% sand particles.
Silt	Its size is between that of sand and clay. It feels smooth to the touch (like flour). Refers to soil texture of 80% silt particles.
Soil aggregates	Soil particles of various sizes held together by organic matter and other substances. Sometimes called peds when formed naturally, or clods when formed by tillage.
Soil structure	Arrangements of soil particles into aggregates (peds) of various shapes and sizes by wetting and drying, fungal activity, tillage and activity of roots.
Soil texture	The coarseness or feel of soils. Measured by the relative amounts of sand, silt and clay using the USDA soil texture triangle.
Symbiosis	Living together of two dissimilar organisms to the benefit of both.
Till	The act of cultivating or ploughing the land, preparing it for seeding or planting.
Water-holding capacity	Ability of water to retain water.
Weathering	The physical, chemical and biological disintegration of rocks and minerals belonging to the earth's crust.
Workability	Ease with which soil can be tilled, and how long takes to reach a certain level of cultivation (tilth).